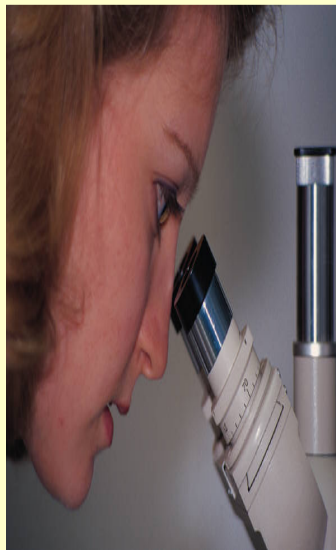


# REGISTERED APPRENTICESHIP

## Tool for Workforce and Economic Development Professionals



*America faces critical shortage of skilled workers.  
Expanding registered apprenticeship opportunities offers  
an effective approach to meet the needs of U.S. industry  
and citizens in search of high quality training and a good  
career.*



# **CONTENTS**

Overview of Apprenticeship 1	Section
Vision for 21 <sup>st</sup> Century Apprenticeship 2	Section
Office of Apprenticeship 3	Section
Role of the Apprenticeship Representative 4	Section
Common Questions Asked by Workforce Professionals 5	Section
Benefits of Registered Apprenticeship 6	Section
Apprenticeship Standards 7	Section
Common Performance Measures for WIA & Office of Apprenticeship 8	Section
Examples of High Growth Occupations 9	Section

## **SECTION 1**

*Annually there are approximately one-half million registered apprentices trained by American industry. They are learning under the guidance of experienced skilled workers in such occupations as aircraft mechanic, computer operator, machinist, dental laboratory technician, wine maker, electrician, drafter, electronic technician, operating engineer, maintenance mechanic, chef and many more. Business, labor, and government work together to promote apprenticeship and to develop sound standards for its practice.*

### **Looking Backward**

Since time immemorial, people have transferred skills from one generation to another in some form of apprenticeship. Four thousand years ago, the Babylonian Code of Hammurabi provided that artisans teach their crafts to youth. The records of Egypt, Greece, and Rome from earliest times reveal that skills were still being passed on in this fashion. When youth in olden days achieved the status of skilled workers, they became important members of society. The status given the skilled worker was well placed. As we all know, many countries no longer have kings but still have skilled workers.

### **Indenture Imported From Europe**

When America was settled, skilled workers coming to the New World from England and other European countries brought with them the practice of indenture and the system of master-apprentice relationships. Indenture derived its name from the English practice of tearing indentions or notches in duplicate copies of apprenticeship forms. This uneven edge identified the copy retained by the apprentice as a valid copy of the form retained by the master. In those days, both the original and the copy of the indenture were signed by the master and the parent or guardian of the apprentice. Most of the apprentices were 14 years of age or younger. The modern apprenticeship agreement is signed by the employer; by a representative of an apprenticeship committee, or both; and by the apprentice. If the apprentice is a minor, the parent or guardian also signs.

### **Apprenticeship Undergoes Change**

With the expansion of industry following the industrial revolution, the apprenticeship system was revolutionized to apply to the new machine age. The early system of "domestic apprenticeship," in which the apprentice lived with a master and was dependent upon the master for food and clothing as well as shelter, disappeared. Employers changed compensation to the payment of wages, although insignificant compared with today's wages, graduated in accordance with a predetermined scale. The term "master," however, continued in some occupations, and "master machinist" and "master plumber" are still familiar terms. The effect of the modern system of division of function began to make itself felt in the first half of the 19th century. In many occupations, skilled workers who in the past had engaged their apprentices for five years to teach them all aspects of the occupation began to teach them only one part of the job that could be learned in a few months. Apprenticeship systems, in keeping with the new era, were gradually developed in the growing industries, at first in the iron foundries and shipbuilding yards, and later in machinery and electrical equipment plants, government arsenals, navy yards, and printing shops. Not until the latter part of the nineteenth

century were any apprenticeship systems begun that were at all comparable with those of today. However, the number of plants in which apprentices were trained was limited and the training was, for the most part, somewhat sketchy when measured by modern standards. The great majority of skilled workers still came from abroad. Most of the workers who acquired their skills in this country learned on their own by watching and getting the advice of experienced workers, by sheer persistence, and by trial and error.

### **Graduated Wages For Apprentices**

An 1865 indenture used by the Pennsylvania Railroad provides one of the first examples of a graduated wage scale paid to apprentices. It prescribed 50 cents for a 10-hour day in the first 620 days of training, 60 cents a day in the next 310 days, and 80 cents a day for the balance of the apprenticeship term. A bonus of \$124 was paid when an apprentice completed training. In the late 1960s, the starting wage for maintenance-of-equipment apprentices employed by railroads averaged \$2.54 an hour, more than five times the starting wage for 10 hours in 1865 and increased to \$2.94 during the final period. Today all Registered Apprenticeship programs adhere to graduated wages. The national average starting wage for an Apprentice is **\$13.57** and the completion wage is **\$24.07**.

### **First Apprenticeship Legislation**

The first legislation in the United States to promote an organized system of apprenticeship was enacted in Wisconsin in 1911. The law placed apprenticeship under the jurisdiction of an industrial commission. This followed the enactment of state legislation requiring all apprentices to attend classroom instruction five hours a week. In the 1920s, national employer and labor organizations, educators, and government officials began a concerted effort to bring about a national, uniform apprenticeship system. In the forefront of this movement were representative groups of the construction industry. The need for comprehensive training of apprentices had become a vital necessity in the boom days following World War I. Immigration was curtailed after the war, so fewer skilled workers were entering from other countries. The combined effort of the various groups led in 1934 to the participation of the Federal Government in the national promotion of apprenticeship. The Federal Committee on Apprenticeship, composed of representatives of Government agencies, was appointed by the Secretary of Labor to serve as the national policy-recommending body on apprenticeship in the United States. It was to assume the responsibilities with respect to apprentices and their training under industrial codes formulated by the National Recovery Administration.

### **National Apprenticeship Law Is Enacted**

In 1937, Congress passed the National Apprenticeship Law. This law, popularly known as the Fitzgerald Act, was enacted.

### **The National Apprenticeship Act**

*50 Stat. 663; 29 U.S.C 50 states :* "To enable the Department of Labor to formulate and promote the furtherance of labor standards necessary to safeguard the welfare of apprentices and to cooperate with the States in the promotion of such standards. Be it enacted by the Senate and House of Representatives of the United States of America in congress assembled, That the Secretary of Labor is hereby authorized and directed to

formulate and promote the furtherance of labor standards necessary to safeguard the welfare of apprentices, to extend the application of such standards by encouraging the inclusion thereof in contracts of apprenticeship, to bring together employers and labor for the formulation of programs of apprenticeship, to cooperate with State agencies engaged in the formulation and promotion of standards of apprenticeship, and to cooperate with the National Youth Administration and with the Office of Education of the Department of the Interior in accordance with section 6 of the Act of February 23, 1917 (39 Stat. 932), as amended by Executive Order Numbered 6166, June 10, 1933, issued pursuant to an Act of June 30, 1932 (47 Stat. 414), as amended. Sec. 2. The Secretary of Labor may publish information relating to existing and proposed labor standards of apprenticeship, and may appoint national advisory committees to serve without compensation. Such committees shall include representatives of employers, representatives of labor, educators, and officers of other executive departments, with the consent of the head of any such department. Sec. 3. On and after the effective date of this Act the National Youth Administration shall be relieved of direct responsibility for the promotion of labor standards of apprenticeship as heretofore conducted through the division of apprentice training and shall transfer all records and papers relating to such activities to the custody of the Department of Labor. The Secretary of Labor is authorized to appoint such employees as he may from time to time find necessary for the administration of this Act, with regard to existing laws applicable to the appointment and compensation of employees of the United States: Provided, however, That he may appoint persons now employed in division of apprentice training of the National Youth Administration upon certification by the Civil Service Commission of their qualifications after non-assembled examinations. Sec. 4. This Act shall take effect on July 1, 1937, or as soon thereafter as it shall be approved. *Approved, August 16, 1937."*

#### **Labor Standards For The Registration Of Apprenticeship Programs**

**(TITLE 29 CFR PART 29)** This part sets out labor standards, policies and procedures relating to the registration, cancellation and de-registration of apprenticeship programs and of apprenticeship agreements by the Office of Apprenticeship (OA), the recognition of a State Apprenticeship Council (SAC) or Agency (SAA) as the appropriate agency for registering local apprenticeship programs for certain Federal purposes.

#### **Equal Employment Opportunity In Apprenticeship And Training**

**(TITLE 29 CFR PART 30)** This part sets forth policies and procedures to promote equality of opportunity in apprenticeship programs registered with the U.S. Department of Labor and in state apprenticeship programs registered with recognized state apprenticeship agencies. These policies and procedures apply to the recruitment and selection of apprentices, and to all conditions of employment and training during apprenticeship.

#### **Modern Apprenticeship Programs**

The Fitzgerald Act of 1937 set the pattern for today's system of Federal Government assistance in apprenticeship programs. The Federal Committee on Apprenticeship was reorganized and enlarged to include equal representation of employers and labor, plus a representative of the U.S. Office of Education. The Apprentice-Training Service



(formerly the *Bureau of Apprenticeship and Training* ; presently the *Office of Apprenticeship*) was established as the national administrative agency in the Department of Labor to carry out the objectives of the law, guided by the recommendations of the Federal Committee on Apprenticeship. Since 1937, the Office of Apprenticeship has worked closely with employers and labor groups, vocational schools, state apprenticeship agencies, and others concerned with apprenticeship programs in U.S. industry. The Office of Apprenticeship represents all 50 States. Its functions are advisory, technical, and promotional. It does not itself conduct training programs. A major means for promoting apprenticeship is through a wide exchange of information on the advantages and methods of well-organized and well-run apprenticeship programs. The Office of Apprenticeship disseminates this information widely through newspapers, industrial periodicals, discussions at annual conventions of employer associations and unions, and regional apprenticeship conferences.

### Apprenticeship Benefits For Youth And Industry

For young persons just starting out in the world of work, apprenticeship has important advantages. It offers an efficient way to learn skills, for the training is planned and organized and is not haphazard. The apprentices “*earn as they learn,*” for they are already workers. When their apprenticeship is completed, youth are assured of a secure future and a good standard of living because the training is in occupations where skills are much in demand. Opportunities for employment and advancement open up with the recognition that the apprentices are now skilled workers. Industry too benefits greatly. Registered Apprenticeship programs develop skilled workers competent in all branches of their occupations and able to work without close supervision because their training has enabled them to use imagination, ability, and knowledge in their work.

### Women In Apprenticeship

Increasing numbers of women in apprenticeship reflect some of our changing attitudes about whose hands may do our skilled work. From 1900 to 1960, each decennial census showed that women held only 2 to 3 percent of the jobs in skilled occupations, a figure that varied only during World War II. However, by 1982 women had more than doubled their share, holding nearly 6.5 percent of the jobs in skilled occupations. They account for nearly a million skilled workers. All skilled occupations now report at least some women at work. They include such traditionally “men’s” jobs as automobile mechanics, carpenters, heavy equipment mechanics, and telephone installation and repair workers. Despite this progress, many women still do not use the apprenticeship route to a well-paid occupation. The majority of women in apprenticeship are found in cosmetology and a few other occupations. Through federally funded outreach programs, the Department of Labor and local and national organizations are trying to broaden the horizons of women, counselors, prospective employers, and apprenticeship councils.

### Veterans in Apprenticeship

For eligible veterans, apprenticeship offers special opportunities. When they enter approved apprenticeship programs, they may receive in addition to their wages a monthly training assistance allowance. In addition, some veterans will be already eligible for skilled worker status when they are discharged, as the result of an agreement between the

armed services and the Department of Labor. Work experience in the occupation can be counted toward the credits required for skilled worker status. Those who fall short of the required credits at the time of discharge will receive counseling on how to meet the remaining requirements.

## **SECTION 2**

### **Vision For 21<sup>st</sup> Century Apprenticeship**

*While everyone knows that apprenticeship is a proven training model for construction, not everyone knows that Apprenticeship in the 21<sup>st</sup> century is keeping pace with economic changes and offers skills development, a competency-based training system, and interim credentials in high growth, high demand industries, such as Healthcare, Biotechnology, Advanced Manufacturing and Information Technology.*

*Registered Apprenticeship is an important talent development strategy and a critical post-secondary education and training alternative in the suite of options offered through the workforce system, as demonstrated through the following concepts:*

**Critical Education and Training Model:** Apprenticeship is a critical education and training model for developing 21<sup>st</sup> century skills to meet the needs of high growth, high demand industries and to support a competitive workforce, which is essential to our nation's economic growth.

**Talent Development Solution Meeting Business Needs:** In a demand-driven workforce system, federal, state, and local workforce and apprenticeship staff work collaboratively with business and industry, education and training providers, and other key partners to develop workforce solutions to provide workers with the skills businesses need. The Registered Apprenticeship system coordinates with industry leaders to define competency models that help shape workforce education. Using these competency models, Registered Apprenticeship provides workers with quantifiable skills and portable industry-recognized credentials that meet business needs and requirements.

**Expanded Training Options for Workers:** Apprenticeship training opportunities should be routinely integrated into career guidance and career exploration services offered through the One-Stop delivery system, both virtually and as part of staff assisted services. By better integrating Registered Apprenticeship as a critical post-secondary training option, workers and employers will have greater access to expanded training services through the One-Stop Career Centers.

**Integration Strategies and Policies:** To ensure that the workforce system consistently integrates Registered Apprenticeship in service delivery strategies for businesses and current and future workers, it is critical to develop strategies, policies, and service delivery models that fully integrate apprenticeship as a workforce solution and an education and training alternative for students and workers accessible through the One-Stop delivery system.

**Broader Human Resource Development System:** Workforce system leaders must promote workforce investment policies, including those driving the use of federal workforce investment system funds that recognize apprenticeship as a critical component



of the greater human resource development system and a valuable workforce education and preparation strategy.

### SECTION 3

#### Office Of Apprenticeship

The Office of Apprenticeship, Employer and Labor Services (OATELS) and the Bureau of Apprenticeship and Training (OA) have been combined and our official title is now:

***“Office of Apprenticeship (OA)”***

The Office of Apprenticeship develops materials and conducts a program of public awareness to secure the adoption of training in skilled occupations and related training policies and practices used by employers, unions, and other organizations; develops policies and plans to enhance opportunities for minority and female participation in skilled training; and coordinates the effective use of Federal, labor, and resources to create a clear training-to-employment corridor for customers of the workforce development system. OA engages in partnership activities, ensuring quality service and customer satisfaction. The National Apprenticeship Act authorizes the Federal government, in cooperation with the States, to oversee the nation’s apprenticeship system. The U.S. Department of Labor’s Office of Apprenticeship and individual State Apprenticeship Councils and Agencies are responsible for:

- ◆ Registering Apprenticeship programs that meet Federal and State Standards
- ◆ Protecting the safety and welfare of apprentices
- ◆ Issuing nationally recognized and portable Certificates of Completion to apprentices
- ◆ Promoting the development of new programs through marketing and technical assistance
- ◆ Assuring that all programs provide high Quality training
- ◆ Assuring that all programs provide training that produce skilled competent workers

***Office of Apprenticeship is part of the Employment and Training Administration  
(ETA)***

## **Section 4**

### **Role of The Apprenticeship and Training Representative (ATR)**

- Provide technical services at “NO” cost to potential and existing program sponsors;
- Provide on-going technical assistance and consultation services;
- Assist with the development of standards to include work process and related instruction requirements;
- Register programs and Apprentices; and
- Conduct program compliance reviews.
- Collaborate with our Customers:
  - ✚ Workforce Development Community
  - ✚ Community and Private Colleges
  - ✚ Current Sponsors
  - ✚ Employer Associations
  - ✚ Private Employers
  - ✚ Labor/Management Organizations
  - ✚ Industry Groups
  - ✚ Technical Schools
  - ✚ Faith-Based and Community-Based Organizations
  - ✚ Civic Organizations
  - ✚ The Apprentice
  - ✚ Other Government Agencies:
    - Veterans
    - State Dept. of Economic Development
    - Dept. of Education
    - Job Corps
    - U. S. Dept of Veterans Affairs
    - Bureau of Prisons (State and Federal)
    - Probation Offices (State and Federal)

## **Section 5**

### **Below are Common Questions asked by Workforce Professionals**

#### **What Is A Registered Apprenticeship?**

Registered Apprenticeship is a national training system that combines paid learning on-the-job and related technical and theoretical instruction in a skilled occupation. The purpose of a Registered Apprenticeship program is to enable employers to develop and apply industry standards to training programs that can increase productivity and improve the quality of the workforce. In the United States today, 250,000 separate employers offer Registered Apprenticeship employment and training to almost 450,000 apprentices in such industries as construction, manufacturing, transportation, telecommunications, information technology, biotechnology, retail, health care, the military, utilities, security, and the public sector. By providing on-the-job learning, related classroom instruction, and guaranteed wage structures, employers who sponsor apprentices provide incentives to attract and retain more highly qualified employees and improve productivity and services. Regions that adopt robust Registered Apprenticeship programs in the context of economic development strategies create seamless pipelines of skilled workers and flexible career pathways to meet current and future workforce demands. Apprenticeship programs registered with the Federal Government are called "Registered Apprenticeship Programs." Registered Apprenticeship programs meet federally approved and industry-endorsed standards relating to job duties, related classroom instruction, wages, and safety and health conditions. These standards are contained in the Federal legislation known as the Labor Standards for the Registration of Apprenticeship Programs (Title 29 CFR Part 29) and the Equal Employment Opportunity in Apprenticeship and Training (Title 29 CFR Part 30). The Office of Apprenticeship (OA), which is part of the United States Department of Labor, is the national administrative agency that carries out the objectives of the law.

#### **Who Administers Registered Apprenticeship?**

Office of Apprenticeship provides apprenticeship services in all fifty States, and registers programs and apprentices in the 24 States where there is no State Apprenticeship Council (SAC) or Agency (SAA).

##### **REGION I**

Boston  
Connecticut  
Maine  
Massachusetts  
Maryland  
New Hampshire  
New York  
Puerto Rico  
Rhode Island  
Vermont  
Virgin Islands

##### **REGION II**

Delaware  
District of Columbia  
Pennsylvania  
New Jersey  
Virginia  
West Virginia

##### **REGION III**

Alabama  
Florida  
Georgia  
Kentucky  
Mississippi  
North Carolina  
South Carolina  
Tennessee

**REGION IV**

Arkansas  
Colorado  
Louisiana  
Texas  
New Mexico  
North Dakota  
Montana  
South Dakota  
Utah  
Wyoming  
Oklahoma

**REGION V**

Illinois  
Indiana  
Iowa  
Kansas  
Michigan  
Minnesota  
Missouri  
Nebraska  
Ohio  
Wisconsin

**REGION VI**

Alaska  
Arizona  
California  
Hawaii  
Idaho  
Nevada  
Oregon  
Washington

**Who Operates And Pays For Registered Apprenticeship Training?**

Registered Apprenticeship programs are operated by both the private and public sectors. Sponsors include employers, employer associations and joint labor/management organizations. Program sponsors pay most of the training costs while simultaneously increasing the wages of the apprentices as their skill levels increase. Registered Apprenticeship training can be competency based or time based with training generally ranging from one to six years depending on the needs of the program sponsor. For the apprentice, this translates into an educational benefit worth \$40,000 to \$150,000. Because the training content is driven by industry needs, the end-result of apprenticeship programs is extremely well trained workers whose skills are in high demand. Recently, Private Colleges, Community Colleges, Workforce Development, Faith, and Community Based Organizations have collaborated with business and industry to sponsor registered apprenticeship programs through employer-participation agreements.

**Types of Apprenticeable Programs**

**Group-joint (GJ)** —Multi- employers (group) jointly administered by labor and management.

**Individual Joint (IJ)** — individual employer with labor organization involved.

**Group Non-joint (GNJ)** — employer group with no labor organization involved.

**Individual Non-joint (INJ)** — individual employer with no labor organization involved.

**Group Waiver (GW)** — employer group where either the employer group or the labor organization has voluntarily waived participation.

## **What Is An Apprenticeable Occupation?**

An apprenticeable occupation is a skilled occupation that possesses all of the following characteristics:

- ◆ It is clearly identified and commonly recognized throughout an industry.
- ◆ It is customarily learned in a practical way through a structured, systematic program of on-the-job supervised training.
- ◆ It involves manual, mechanical, or technical skills and knowledge that require a minimum of 2,000 hours of on-the-job work experience (more hours for more complex occupations.)
- ◆ It requires related classroom instruction to supplement the on-the-job training.

## **How Many Occupations are Apprenticeable?**

Nationwide, there are registered apprenticeship programs for over 1000 occupations and that number continually grows. A few of the traditional skilled occupations in which apprentices are being trained are: automotive technician, baker, bricklayer, carpenter, electrician, machinist, maintenance mechanic, operating engineer, painter, roofer, sheet metal worker, structural steel worker, and tool and die maker. However, there are many other occupations that have apprenticeship programs. Examples of these occupations are computer programmer, computer service mechanic, dairy technologist, dental assistant, electronics technician, environment analyst, fire fighter, horticulturist, insurance claims adjuster, laboratory technician, optical technician, wastewater treatment plant operator, chef, and many others.

## **How Long Are Apprenticeship Programs?**

The length of an apprenticeship program depends on the complexity of the occupation and the type of program (Time Based, Competency Based, or a Hybrid). Apprenticeship programs range from 1 year to 6 years, but the majority are 4 years in length. During the program, the apprentice receives both structured, on-the-job learning (OJL) and related classroom instruction (RTI). For each year of the apprenticeship, the apprentice will receive normally 2,000 hours of on-the-job training and a recommended minimum of 144 hours of related classroom instruction.

### **Time-Based Requirements**

A time-based occupation requires a minimum of 2,000 hours, which includes an outline of the specific work processes and the approximate time requirement for each individual work process under that occupation.

### **Competency/Performance Program Requirements**

Competency/performance based apprenticeship programs are premised on attainment of demonstrated, observable and measurable competencies in lieu of meeting time based work experience and on-the-job learning. However, these programs still have to comply



with the requirement for the allocation of the approximate time to be spent in each major process. Therefore, work experience process schedules and related instruction outlines must specify approximate time of completion or attainment of each competency, which can be applied toward the 2,000-hour requirement (competencies demonstrated notwithstanding and assuming no credit for previous experience). In competency/performance based programs apprentices may accelerate the rate of competency achievement or take additional time beyond the approximate time of completion or attainment due the open entry and exit design. Competency is defined as, "An observable, measurable pattern of skills, knowledge, abilities, behaviors and other characteristics that an individual needs to perform work roles or occupational functions successfully."

Competency/performance based training programs have the following characteristics:

- ◆ Competencies should be identified and defined through a job/task analysis and directly related to the job/role.
- ◆ Organized learning activities should be structured and wherever possible, self-paced with open entry and open exit.
- ◆ Measures or tests of competency attainment should be observable, repeatable and agreed to in advance.
- ◆ Work experience process schedules and related instruction outlines should include the approximate time/hours or minimum - maximum times/hours for each competency attained in order to document successful completion.

### **Hybrid Program Requirements**

In addition to time-based programs which have a fixed set time for completion (i.e., 2,000, 4,000, 6,000 hours) and competency/performance based programs, a third alternative has evolved which, in effect, is a "hybrid" of the two types of programs previously mentioned. This third type of program is basically a combination of time and performance considerations whereby work processes are developed with a minimum - maximum time/hours for each task or job requirement (i.e., minimum 200 hours - maximum 400 hours). *[Reference Bulletin 95-06]*

### **How Does On-The-Job Learning (OJL) Work?**

OJL is structured around a "work process." A work process is an outline of the skills and competencies of an occupation that the apprentice must master during the apprenticeship. Work processes are developed in cooperation with the Office of Apprenticeship and the employers or unions based on national industry standards. Sponsors are responsible for structuring the OJL component of their apprenticeship program based on a work process for that occupation. A work process may be modified to meet individual employer needs, but only under the guidance and approval of the OA and/or the SAC or SAA. Although modifications are allowed for individual employers, the resulting OJL must be substantially the same as the national standards for that occupation.

### **Who Supervises On the Job Learning (OJL)?**

OJL is supervised by an experienced worker known as a journey worker (mentor), the status the apprentice will receive after successfully completing their apprenticeship. The sponsor appoints journey worker mentors. During OJL training, the apprentice works under the supervision of the mentor. Under the mentor's guidance, the apprentice performs increasingly complex tasks under less and less supervision by the mentor, as the apprentice gradually masters the skills and competencies of the occupation.

### **What Is Related Training Instruction (RTI)?**

The related training instruction of a registered apprenticeship program supports the OJL component of the occupation. It provides the theoretical and technical knowledge, and the techniques of the occupation, needed by the apprentice to become competent in the occupation. It also includes detailed discussions of how typical tasks are performed and the safety precautions that must be taken.

### **Who Provides The Related Classroom Instruction?**

Related classroom instruction may take place through a variety of delivery systems, depending on the requirements of the program. Related classroom delivery systems may include, but are not limited to vocational-technical schools and institutes, in-house instruction, college-related instruction, industry schools, on-line, or a combination of the above.

### **Do Apprentices Receive Wages?**

Yes! Apprentices in registered apprenticeship programs *“earn while they learn,”* because they are full-time employees during their apprenticeship. Generally, apprentices start at 50% of the wage an employer pays an experienced worker in that occupation (but the apprentice cannot receive less than the state minimum wage). The apprentices' wages are increased periodically throughout the apprenticeship to reflect their mastery of the occupational skills and their ability to work independently. The sponsor increases apprentices' wages by periods of time, such as every 6 months or once a year, for each year of the apprenticeship program. These periodic wage increases are known as a "wage schedule." In developing and implementing a wage schedule, the sponsor agrees to grant periodic wage increments if the apprentices are performing satisfactorily. The Office of Apprenticeship helps sponsors develop the wage schedule for their individual apprenticeship program. Where there is a collective bargaining agreement in force, apprentice wage schedules will follow the provisions of the collective bargaining agreement.

### **What About Credentials?**

Upon successful completion of both the on-the-job learning (OJL) and the related classroom training instruction (RTI), graduating apprentices receives a "Certificate of

Completion of Apprenticeship Training,” indicating that the apprentice has successfully completed the OJL and RTI component of the apprenticeship program. These certificates are signed by the Secretary of Labor and issued by the Office of Apprenticeship or, in those states not having such an agency, by the state apprenticeship agencies in accordance with its recommended standards. Certificates of Completion are "portable," meaning they are recognized throughout an industry because registered apprenticeship training programs are based on industry standards.

### **Who Does Registered Apprenticeship Serve?**

Both men and women at least 16 years old are eligible to apply. However, most sponsors require that applicants be at least 18 years old, because insurance policies frequently cover only workers 18 years and over (unless under age applicants are enrolled in a specific educational program such as the cooperative education program or the registered apprentice program that provides exceptions). In the U.S today, over 30,000 program sponsors representing over a quarter million employers, industries and companies offer registered apprenticeship training to approximately one half million apprentices. These programs serve a diverse population including minorities, women, youth and dislocated workers.

### **What Are The Entrance Requirements?**

Federal regulations require that apprentices be selected on the basis of objective and specific standards. Applicants must be treated equally during the selection process without regard to race, religion, color, sex, or national origin. Generally, program sponsors look for prospective apprentices who have the mechanical and mental abilities to master the techniques and technology of the occupation. Therefore, sponsors set qualification standards that applicants must meet. Requirements vary from occupation to occupation, program to program. For example, an applicant may be required to pass an aptitude test, hold a high school diploma, meet a minimum age requirement, pass occupationally essential physical requirements, have acceptable school grades, have work experience in a similar field, and be interviewed. Other programs may have more specific requirements, such as a driver's license or the ability to work with a team. The minimum level of education required also varies. Most programs require entrants to have a high school diploma or its equivalent. Despite the level of education required, apprentices need a firm grounding in reading, writing, and mathematics - all basic to skilled and technical occupations.

### **Do Veterans Receive Their VA Benefits?**

Yes! Veterans may qualify for benefits while enrolled in a registered apprenticeship program and are encouraged to contact the Veterans Education and Training Office or the Office of Apprenticeship. Registered Apprenticeship programs are approved for veterans' benefits under the Montgomery GI Bill. Work experience in their military occupation can be counted toward the credits required for skilled worker status. Provides Employment and certifications to our Veterans!

## Are There Apprenticeship Linkage Programs For Youth?

High school students may be eligible to enroll in a registered apprenticeship program while still in high school. This is a "linkage" or also known as "School to Apprenticeship" program. Students must have both school and employer approval to enroll in a linkage program. Students enrolled in a linkage program attend school part-time and work part-time as apprentices. Upon graduation, they are expected to continue with their sponsor as full-time apprentices, eventually reaching journey worker status. Graduating linkage students may be granted advanced standing in their adult apprenticeship for their secondary school occupational program experience. All state child labor laws must be followed. Schools, and employers interested in setting up a linkage program should contact their local Apprenticeship Representative.

## To Sum Up.....

### **Key Points**

- ✚ Registered Apprenticeship is one of the few training approaches, public or private, in the United States that is driven directly by the demands of industry.
- ✚ Private and public sector industries and/or organizations can become a sponsor of an Apprenticeship Program.
- ✚ Apprenticeship Programs can be designed as time-based, competency-based, and/or a combination of both.
- ✚ Nationally recognized programs that provide high-level certification and certificates that meet industry standards.
- ✚ Registered Apprenticeship differs generally from other forms of OJT or Internship programs in its duration, its objectives, and its related training instruction component; it differs more specifically in that the terms and conditions of employment and training are stated in advance. Registered Apprenticeship provides a well-paying job as it develops marketable skills, because apprentices are employees, they are not training or attending school for a job that may or may not exist when the training or schooling is completed. Apprentices are training and working on the career.

### **Key Elements of Apprenticeship**

- ✚ Employment
- ✚ Structured, on-the-job learning
- ✚ Related Training Instruction
- ✚ Incremental wage increases as skill and productivity levels increase
- ✚ Development of employees by qualified mentors
- ✚ Driven by industry
- ✚ Flexible system
- ✚ Nationally recognized and portable credentials
- ✚ Career development and pathways

- ✚ Academic Partnerships have been forged with community colleges that allow apprentices to earn Associate's degree while serving their Apprenticeship
- ✚ Linkages with the workforce system, and One-Stop Career Centers

### **Key Elements for Standards of Apprenticeship**

Programs registered by the Office of Apprenticeship must provide that:

- ✚ the starting age of an apprentice is not less than 16;
- ✚ there is full and fair opportunity to apply for apprenticeship;
- ✚ there is a schedule of work processes in which an apprentice is to receive training and experience on the job;
- ✚ the program includes organized instruction designed to provide apprentices with knowledge and technical subjects related to their trade (a minimum of 144 hours per year is normally considered necessary);
- ✚ there is a progressively increasing schedule of wages;
- ✚ proper supervision of on-the-job training with adequate facilities to train apprentices is insured;
- ✚ the apprentice's progress, both in job performance and related instruction, is evaluated periodically and appropriate records are maintained;
- ✚ there is employee-employer cooperation;
- ✚ successful completions are recognized; and
- ✚ there is no discrimination in any phase of selection, employment, or training.

## **SECTION 6**

### **Benefits of Registered Apprenticeship**

***Business and Labor benefits*** by addressing their skilled labor shortage needs by developing customized training programs utilizing both academic and on the job training models; Greater competence of employees; Reduces variance in performance; Greater employee retention; Lower investment in recruitment; Improved quality of service and product

***The College(s) benefits*** by collaborating with the Office of Apprenticeship and, businesses/labor organizations in developing customized training program specifically for their unique skilled occupations. Registered Apprenticeship attracts students who normally would not be attending College. One-Hundred percent employment rates for graduating apprentice students. Some registered apprenticeship programs also have dual accreditation through post-secondary institutions that apply credit for apprenticeship completion towards an Associate Degree.

***The Worker benefits*** through the Apprenticeship Agreement, an apprentice, as an employee, receives supervised, structured on-the-job training combined with related technical instruction. The instruction, usually classroom study, in a specific occupation can be held at public secondary or post-secondary schools, employer or union-sponsored schools or community colleges. Providing the workers with Portable Credentials, full time employment/career, college credit (in some states Eligible veterans receive VA educational benefits while participating in an approved program. Individuals completing formal training through registration with this office will receive validated credentials as fully qualified journey level workers.



***The Economy benefits*** by providing value added services to the business community; by obtaining greater access to high paying, high skilled jobs; greater visibility in the employer community; greatly enhancing their performance through a joint relationship with the Apprenticeship program . Increased competitive edge in global economy. Lessened need to import skilled workers. Because apprentices pay income taxes on their wages, it is estimated that every \$1 the Federal government invests yields more than \$ 24 in revenues. If all 500,000 + apprentices earn an average income of \$15,000 (a very low average), this generates nearly \$1 billion in Federal tax revenues alone, a significant return on Federal and State investments.

***Overall, everyone benefits!***

## **Section 7**

### **Apprenticeship Standards**

*When program sponsors voluntarily request approval of their training programs, they also voluntarily choose to come under various state and federal regulations affecting the conduct of their training programs. The approved apprenticeship/training standards set forth the terms and conditions of training.*

Companies that meet the requirements of 29 CFR 29 and 29 CFR 30 (if applicable) can be registered with the U.S. Department of Labor. 29 CFR 29 paragraphs 29.5 Standards of Apprenticeship outlines the requirements for a business / organization to be Apprenticeship program to be eligible for registration by a registration/ agency, these are **COMMONLY KNOWN AS THE 22 STEPS:**

(a) The program is an organized, written plan embodying the terms and conditions of employment, training, and supervision of one or more apprentices in the apprenticeable occupation, as defined in this part, and subscribed to by a sponsor who has undertaken to carry out the apprentice training program.

(b) The program standards contain the equal opportunity pledge and, when applicable, an affirmative action plan, a selection method authorized in accordance with 29 CFR 30 or similar requirements expressed in a State Plan for Equal Employment Opportunity in Apprenticeship adopted pursuant to 29 CFR part 30 and approved by the Department, and provisions concerning the following:

- (1) The employment and training of the apprentice in a skilled trade;
- (2) A term of apprenticeship, not less than 2,000 hours of work experience, consistent with training requirements as established by industry practice;
- (3) An outline of the work processes in which the apprentice will receive supervised work experience and training on the job, and the allocation of the approximate time to be spent in each major process;
- (4) Provision for organized, related, and supplemental instruction in technical subjects related to the trade. A minimum of 144 hours for each year of apprenticeship is recommended. Such instruction may be given in a classroom through trade or industrial courses, or by correspondence courses of equivalent value, or other forms of self-study approved by the registration/approval agency;
- (5) A progressively increasing schedule of wages paid to the apprentice consistent with the skill acquired. The entry wage shall be not less than the minimum wage prescribed by the Fair Labor Standards Act, where applicable, unless a higher wage is required by other applicable Federal law, State laws respective regulations, or by collective bargaining agreement;
- (6) Periodic review and evaluation of the apprentice's progress in job performance and related instruction; and the maintenance of appropriate progress records;
- (7) The numeric ratio of apprentices to journeymen consistent with proper supervision, training, safety, and continuity of employment, and applicable provisions in collective bargaining agreements, except where such ratios are expressly prohibited by the collective bargaining agreements. The ratio language shall be specific and clear as to application in terms of jobsite, workforce, department, or plant;
- (8) A probationary period reasonable in relation to the full apprenticeship term, with full credit given for such period toward completion of apprenticeship;
- (9) Adequate and safe equipment and facilities for training and supervision, and safety training for apprentices on the job and in related instruction;
- (10) The minimum qualifications required by a sponsor for persons entering the apprenticeship program, with an eligible starting age not less than 16 years;
- (11) The placement of an apprentice under a written apprenticeship agreement as required by the State apprenticeship law and regulation, or the Office of Apprenticeship where no such State law or regulation exists. The agreement shall directly, or by reference, incorporate the standards of the program as part of the agreement;

(12) The granting of advanced standing or credit for previously acquired experience, training, or skills for all applicants equally, with commensurate wages for any progression step so granted;

(13) Transfer of employer's training obligation when the employer is unable to fulfill his obligation under the apprenticeship agreement to another employer under the same program with consent of the apprentice and apprenticeship committee or program sponsor;

(14) Assurance of qualified training personnel and adequate supervision on the job;

(15) Recognition for successful completion of apprenticeship evidenced by an appropriate certificate;

(16) Identification of the registration agency;

(17) Provision for the registration, cancellation and re-registration of the program; and requirement for the prompt submission of any modification or amendment thereto;

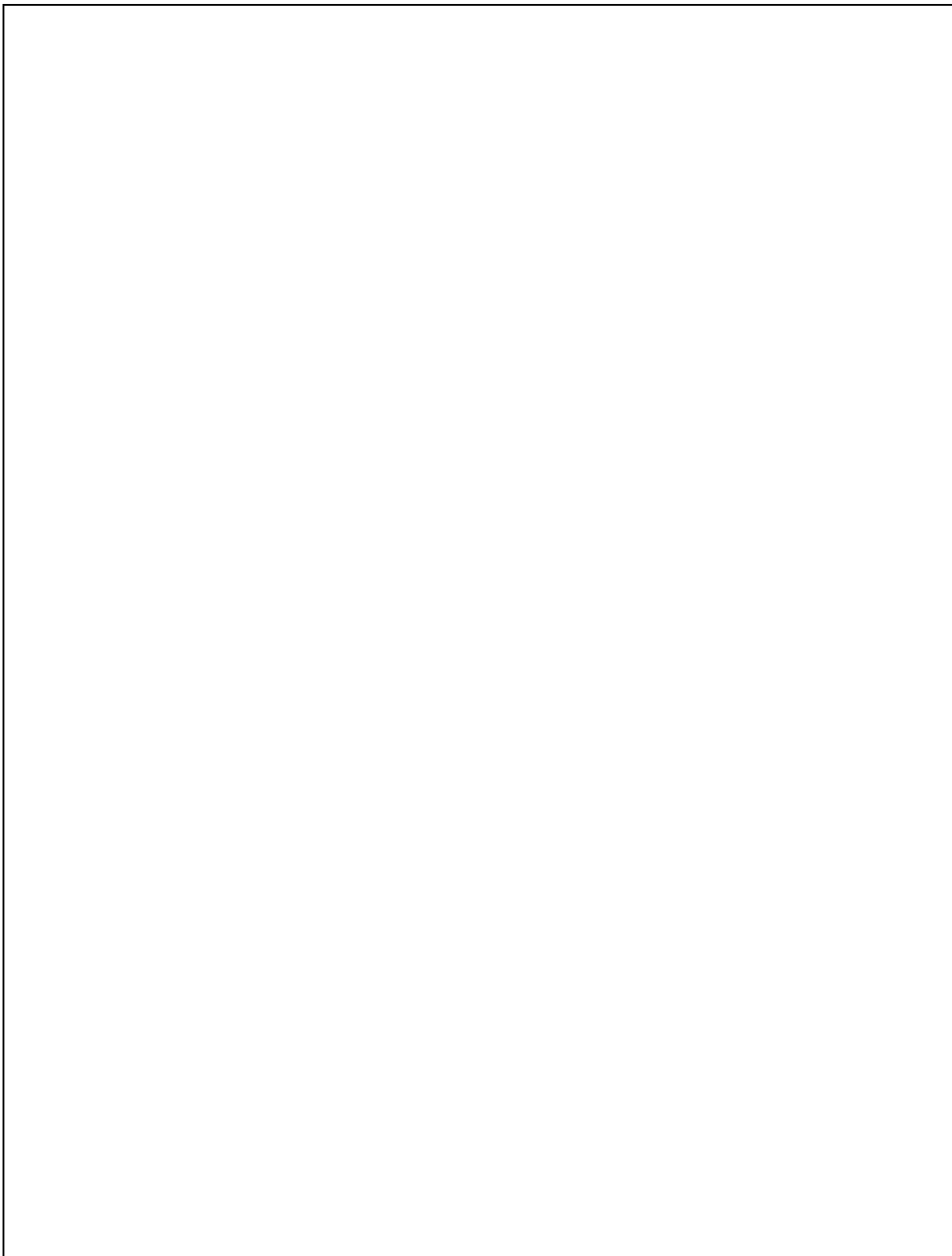
(18) Provision for registration of apprenticeship agreements, modifications, and amendments; notice to the registration office of persons who have successfully completed apprenticeship programs; and notice of cancellations, suspensions and terminations of apprenticeship agreements and causes therefore;

(19) Authority for the termination of an apprenticeship agreement during the probationary period by either party without stated cause;

(20) A statement that the program will be conducted, operated and administered in conformity with applicable provisions of 29 CFR part 30, as amended, or a State EEO in apprenticeship plan adopted pursuant to 29 CFR part 30 and approved by the Department;

(21) Name and address of the appropriate authority under the program to receive process and make disposition of complaints;

(22) Recording and maintenance of all records concerning apprenticeship as may be required by the Office of Apprenticeship or recognized State Apprenticeship Agency and other applicable law.



## **SECTION 8**

### **Common Performance Measures for WIA & Office of Apprenticeship**

*Under WIA, there are four performance measures for adults and dislocated worker programs. Registered Apprenticeship programs meet all criteria and apprentices are employed and trained simultaneously.*

- ◆ **Entry into unsubsidized employment:** The vast majority of the 29,000 apprenticeship sponsors completely fund apprenticeship programs and hire full time upon completion
- ◆ **Retention in unsubsidized employment:** The standard is six months after entry into the employment. Apprenticeship programs run a minimum of one year, and there may be interim credentials and certificates leading up to the year-long program;
- ◆ **Earnings received in unsubsidized employment six months after entry into employment:** All apprentices are paid an incremental wage until they master the occupation for which they are training. At that point they are paid the full wage; and
- ◆ **Attainment of a recognized credential related to achievement of educational skills:** Upon completion of an apprenticeship program, the apprentice receives a certificate of completion. Competency-based program can provide and opportunity for the apprentice to receive a certificate of training upon completion of each level working towards a certificate of completion
- ◆ **Attainment of Degree or Certificate (YOUTH):** Education refers to any organized program of study that leads to a diploma, GED, or certificate. Apprenticeship meets the definition of attainment of a Certificate as defined by this measure. It would result in a 100% completion/certification rate.



If you have any suggestions on ways Workforce and Apprenticeship could integrate, Please contact your Local Apprenticeship Representative or send an e-mail to Timothy J. Carson  
[carson.timothy@dol.gov](mailto:carson.timothy@dol.gov)



## High Growth Apprenticeship Occupations\*

### Advanced Manufacturing:

Machinist (0296CB)  
Tool and Die Maker (0586)  
Experimental Assembler (0183)  
Welding Technician (0498)  
Tool machine Set-up Operator (0588)  
Tool Maker (0584)  
Millwright (0335)  
Engraver, Machine (0963)  
Rubberizing Mechanic (0485)  
Die Maker, Stamping (0118)  
CNC Setup Programming  
Milling, Turner (1100CB)

### Automotive:

Drafter, Automotive Design (0018)  
Automobile Mechanic (0023)  
Automobile Tester (0881)  
Auto-Radiator Mechanic (0784)  
Automobile Body Repairer (0024)  
Automotive Technician Specialist (1034CB)

### Aerospace:

Air Transport Pilot (1046CB)  
Aircraft Armament Mechanic (0863)  
Aircraft Mechanic (0866)  
Aircraft Mechanic, Electrical (0003)  
Airfield Management (1063CB)  
Airplane Inspector (0004)  
Aerospace Propulsion Jet Engine  
Air Traffic Controller (Military only) (1101CB)

### Biotechnology:

Bio-Manufacturing Technician (1102 & 1103CB)

### Construction:

Electrician (0159)  
Carpenter (0067)  
Plumber (0432)  
Cement Mason (0075)  
Sheet Metal Worker (0669)  
Roofer (0480)  
Painter (0379)  
Glaziers (0221)  
Operating Engineer (0365)  
Structural Steel Worker (0669)  
HV/AC Worker (0637)  
Welder (0622)  
Laborer (0661)

Insulation Workers (0909)  
Residential Wireman (1022)

### Energy:

Power plant Mechanic (1045)  
Powerhouse Mechanic (0443)  
Transformer Repairer (0590)  
Boiler Operator (0815)  
Boiler house Mechanic (0038)  
Boilermaker I (0040)  
Line Erectors (0281)  
Line Repairers (0284)  
Pumper-Gauger (0950)  
Line Maintainer (0283)  
Plant Operators (0961)

### Financial Services

Financial Management (1083CB)  
Teller (Financial) (1055)

### Geospatial:

Geospatial Specialist (1062CB)  
Programmer, Engineering & Scientific (0949)  
Computer Operator (0676)  
Photo-Equipment Technician (0924)

### Health Services:

Dental Assistant (0101)  
Dental ceramist (0102)  
Dental Lab Tech (0103)  
Diagnostic Imaging Specialty (1081CB)  
Paramedic (0543)  
Surgical Technologist (1051CB)  
Pharmacist Assistant (0844)  
Pharmacist Support Staff (0844CB)  
Prosthetics Technician (0376)  
Prosthetics (0418)  
Orthodontic Technician (0375)  
Health Support Specialist (1086AA)  
Home Health Aide (1086CB)  
Home Health Director (1103CB)  
Medical Transcriptionist (1111HY)  
Senior Housing Manager (1109CB)  
Computed Tomography (CT) Tech (1116)  
Medical Secretary (0751)  
Medical Coder (1114)  
Medical Assistant (1085)  
Podiatric Assistant (0406)

### Hospitality:

Cook (0663)  
Hotel Associate (1035)  
Housekeeper, Com, Res (0943)  
Bartender (0608)

### Homeland Security:

Police Officer (0437)  
Fire Captain (0576)  
Fire Department Training Officer (1087)  
Fire Fighter (0195)  
Fire Fighter Driver (1092)  
Fire Fighter Paramedic (1091)  
Fire Fighter Specialist Woodland (0544)  
Fire Fighter, Crash, Fire (0192)  
Fire Inspector (0516)  
Electronics technician (0169)  
Fire Marshall (1090)  
Fire Medic (0754)  
Fire Prevention Officer (1089)

### Information Technology:

Computer Operator (0676)  
Computer Peripheral Equipment Operator (0817)  
IT Generalist (1059CB)  
Internetworking Technician (1038)  
Graphic Designer (0010)  
Programmer, Engineering & Scientific (0949)  
Electronic System Technician (1041)

### Retail Trade:

Customer Service Rep (1008)  
Meat cutter (0316)  
Manager Retail Store (0578)  
Manager Food Service (0593)  
Locksmith (0289)  
Jeweler (0260)  
Wine Maker (0034)

### Transportation:

Truck Driver, Heavy (0980)  
Able Seaman (1043)  
Tune-up Mechanic (0600)  
Transmission Mechanic (0592)  
Transportation Clerk (0655)  
Dispatcher (0681)  
Surveyor Assistant (0551)  
Diesel Mechanic (0124)

\*This list is not exhaustive of all the apprenticeship occupations that exist in High Growth Industries. In addition, Office of Apprenticeship currently recognizes over 900 occupations.